(No Model.)

J. H. GARDNER.

RUFFLING AND GATHERING ATTACHMENT FOR SEWING MACHINES.

No. 307,037. Patented Oct. 21, 1884.

Fig. 1.

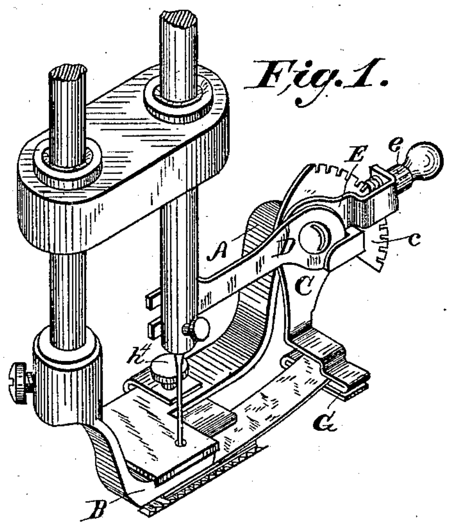


Fig. 5.

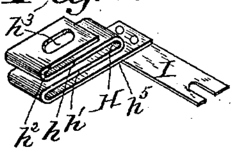


Fig. 6.

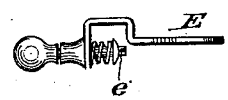


Fig. 2.

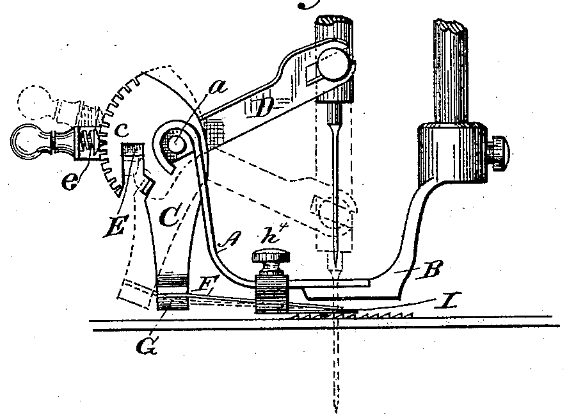


Fig. 8.

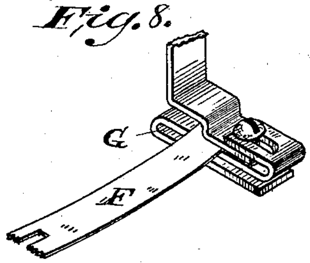


Fig. 4.

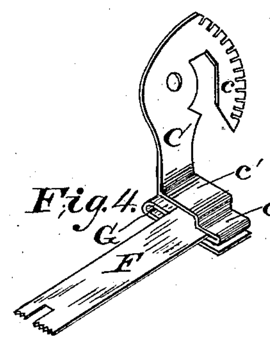


Fig. 3.

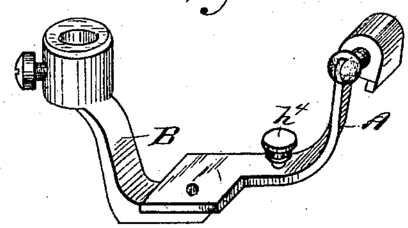
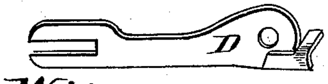


Fig. 7.



Witnesses:

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F. M. Stewart

Inventor.

James H. Gardner

by his attorney

UNITED STATES PATENT OFFICE.

JAMES H. GARDNER, OF YORK SULPHUR SPRINGS, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO DAVID M. STEWART, OF SAME PLACE.

RUFFLING AND GATHERING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 307,037, dated October 21, 1884.

Application filed May 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. GARDNER, a citizen of the United States, residing at York Sulphur Springs, in the county of Adams and State of Pennsylvania, have invented certain new and useful Improvements in Ruffling and Gathering Attachments for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to ruffling or gathering attachments for under-feed sewing-machines; and it consists, mainly, of such construction and combinations of parts that in sewing the ruffled strip to a piece of goods the latter may be edge-stitched or blind-stitched, as may be desired.

In order that my invention may be clearly understood, I have illustrated in the annexed drawings, and will proceed to describe, a practical form thereof.

Figure 1 is a perspective view of my ruffling attachment, showing its application to a sewing-machine. Fig. 2 is a side elevation of the same. Figs. 3 to 8 are detail views.

The same letters of reference indicate identical parts in all the figures.

The frame or standard A of the ruffling attachment is secured to or forms part of the presser-foot B, adapted to be substituted for the ordinary presser-foot of an under-feed sewing-machine; or said standard may be so constructed that it can be fastened to the ordinary presser foot or bar. The upper outer end of the standard, which projects from the presser-foot in a direction toward the side where the operator sits, is provided with a laterally-projecting stud-pin, *a*, on which are pivoted the vibratory arm C and the lever D. The ruffling-blade F is secured to the lower end of the vibratory arm C, as will be more fully explained presently. The long arm of lever D terminates in a fork adapted to engage a stud on the needle-bar, as shown. The short arm of lever D projects under an adjustable tappet on the vibratory arm C. This tappet is secured to the arm C by a spring-latch, which holds it securely in position, so that it cannot be displaced by the strokes of lever D. The tappet shown consists of a bar, E, pivoted on stud *a*, and carrying a spring latch-bolt, *e*, adapted to engage any one of a series of notches cut in the edge of a wing or arc, *c*, of the arm C. The guide G for the strip to be ruffled, hereinafter termed the "strip-guide," is located underneath the ruffling-blade. In case the strip-guide is not adjustable, it may be formed on the lower end of the arm C, as shown in Figs. 1, 2, and 4. If adjustable, it may be formed as shown in Fig. 8, and secured by a set-screw to the lower step, c^2, of the arm C. In either case the ruffling-blade is so secured as to maintain a fixed position relatively to arm C, and the lower end of the latter is provided with a step, c', elevated above the ruffling-blade and the top of the strip-guide, to provide a passage-way for the upper piece of goods to the guide H, hereinafter termed the "upper guide." The strip-guide also constitutes the lower guide for the band or lower piece of goods. The upper guide proper, consisting of a double strip forming the leaves *h* and h', may be secured by its upper leaf, *h*, to the under side of standard A; but this upper guide may form an integral part of the standard. In neither case would the upper guide be adjustable or detachable. If it is to be adjustable, I prefer to construct the detachable upper guide with a clip-leaf, h^2, adapted to slip on the standard A, and provided with a slot, h^3, so that it may be secured in different relations to the needle by a clamping-screw, h^4. In all cases the outer end of the lower leaf, h', of the upper guide is provided with a return-leaf, h^5, the outer end of which projects under the ruffling-blade and carries the separator-blade I, the space between the leaves h' and h^5 forming a passage-way for the ruffling-blade and the strip to be ruffled. The separator-blade I extends beyond the needle and is suitably slotted for its passage. The ruffling-blade, like the separator-blade, is a flat spring so formed as to bear with its outer serrated end on the separator-blade, and also acting antagonistically to the lever D, so as to throw toward the needle on the upstroke thereof. The ruffling-blade throws beyond the needle, and its outer end has a slot for the passage of the needle.

In using this attachment for edge-stitching

the upper piece of goods, the lower piece of goods is passed through the strip-guide and under the separator-blade. The strip to be ruffled is passed above it through the strip-guide and between the separator-blade and the ruffling-blade. The upper piece of goods is passed under the step *c'* of arm C, through the upper guide, H, and between the presser-foot and ruffling-blade. For blind-stitching the upper piece of goods, it is passed over the step *c'* of arm C, over the upper guide, and between the presser-foot and ruffling-blade, the upright side of arm C serving as its edge-guide.

I claim as my invention—

The combination, substantially as before set forth, of the ruffling-blade, the vibratory arm thereof provided with a step elevated above the said blade, the strip-guide, the stationary upper guide, and the separator-blade.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES H. GARDNER.

Witnesses:
E. T. WALKER,
WM. M. HANNAY.